

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The non-final Office Action of March 27, 2003 has been received and contents carefully reviewed.

By this Amendment, Applicants amend claim 11. Accordingly, claims 1-28 are currently pending in this application. Claims 16-28 have been allowed. Reexamination and reconsideration of the application are respectfully requested.

The Examiner rejected claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over Hirano (U.S. Pat. No. 6,292,241) in view of Nakamura et al. (U.S. Pat. No. 5,691,791). Applicants respectfully traverse this rejection.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example “dry-etching a surface of the passivation layer with a gas without using a photo mask such that the surface is embossed and has a plurality of random uneven portions; and forming a reflective electrode on the embossed surface of the passivation layer such that an exterior surface of the reflective electrode is embossed.” None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 1, and claims 2-10, which depend therefrom, are allowable over the cited references.

With respect to claim 1, the Examiner states in the Office Action on pages 2-3,

“Hirano does not teach forming the uneven surface of the resin layer by dry etching. Nakamura et al. discloses a reflective liquid crystal display having a reflective electrode formed on an embossed resin layer. Nakamura et al. teaches that the reflectors were formed by patterning a photosensitive resin or by dry etching. Other methods such as sand blasting and wet etching could also be effectively employed. See column 22, lines 54-57. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to form the reflectors of Hirano by dry etching, because it was one of four well known functionally equivalent methods of forming an embossed surface. The purpose of a mask during dry etching was to selectively etch certain portions of a surface. Because the entire surface of resin layer 108 disclosed by Hirano was embossed, it would have been obvious to one of

ordinary skill in the art at the time of invention to perform dry etching without a mask.”

Applicants respectfully submit, however, that there is no motivation for one of ordinary skill to combine the cited references and arrive at the claimed invention with any reasonable expectation of success. Accordingly, Applicants respectfully disagree with the Examiner’s conclusion that it would have been obvious to one of ordinary skill in the art at the time of invention to perform dry etching without a mask.

Applicants respectfully submit that one of the main subject matters of the present application is to have a reflective LCD device having an embossed reflective electrode without going through one more photolithographic process for the embossed electrode, as this feature is explained in comparison with a related art in the specification. See, for example, p. 7, lines 1-3 and Figure 4 of the instant application. Therefore, Applicants respectfully submit that the claimed feature is patentably distinct, and that none of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention.

Applicants further submit that using a dry-etching technique for the embossed electrode provides control over the embossing rate by adjusting the process conditions of the dry-etch, including etching time. See, for example, p. 11, lines 2-9 of the instant application. Applicants respectfully submit that this controllability over embossing rate provides several advantages over the cited references, thereby making the claimed feature patentably distinct.

Applicants respectfully also submit, “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine reference teachings...Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references, as discussed in the aforementioned section.” See MPEP § 2145.

For the reasons set forth above, Applicants respectfully submit that the Examiner’s conclusion, “it would have been obvious...to form the reflectors of Hirano by dry etching, because it was one of four well known functionally equivalent methods of forming an embossed surface”, is based on an impermissible hindsight reconstruction.

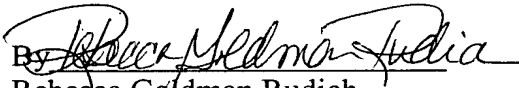
Claim 11 is allowable over the cited references in that claim 11 recites a combination of elements including, for example "a passivation layer on the data line, source electrode, and drain electrode, an entire surface of the passivation layer being embossed by a dry etching and having a plurality of random uneven portions; and an embossed reflective electrode on the passivation layer." None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants submit that claim 11, and claims 12-15, which depend therefrom, are allowable over the cited references.

Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited. If the Examiner deems that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number (202) 496 - 7500. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,



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